

What is claimed is:

1. A method for formatting an optical recording medium, said optical recording medium including a spare area for replacing a defective unit with an available replacement unit, and a defect management area including defect management information for managing a defective area and location information indicating a position of the spare area, the method comprising:

(a) resetting the location information of the spare area in response to a formatting request to indicate at least that there is no spare area assigned; and

(b) formatting the optical recording medium in response to the formatting request at least to use the spare area as a user data area after formatting.

2. The method of claim 1, further comprising:

determining if a spare area has been assigned prior to said resetting step (a) and said formatting step (b), wherein said steps (a) and (b) are performed if a spare area has been assigned.

3. The method of claim 1, wherein said resetting step (a) comprises converting the location information of the spare area to a predetermined value.

4. The method of claim 3, wherein the predetermined value is a lowest possible address value.

5. The method of claim 3, wherein the predetermined value is a highest

possible address value.

6. The method of claim 3, wherein the predetermined value is a specific preset code.

7. The method of claim 1, wherein said formatting step (b) includes registering sectors judged to have defects into a new PDL (primary defect list), if the optical recording medium is to be formatted with certification.

8. The method of claim 1, wherein said formatting step (b) includes registering all sectors previously judged in an old SDL (secondary defect list) into a new PDL (primary defect list) if the optical recording medium is to be formatted without certification.

9. The method of claim 1, wherein the location information of the spare area is stored in a secondary defect list of the defect management area of the optical recording medium.

10. The method of claim 9, wherein the location information of the spare area includes start and end addresses of the spare area on the optical recording medium.

11. The method of claim 7, wherein said formatting step (b) further

includes disposing of an old SDL (secondary defect list) existing prior to said formatting step (b), if the optical recording medium is to be formatted with certification.

12. The method of claim 1, wherein said formatting step (b) reformats the optical recording medium by moving defective sectors registered in a first list to a second list.

13. The method of claim 12, wherein the first list and second list are, respectively, an SDL (secondary defect list) and a PDL (primary defect list) for the optical recording medium.

14. A method of formatting an optical recording medium, said optical recording medium including a spare area for replacing a defective unit with an available replacement unit, and a defect management area including first information for managing a defective area and second information indicating a size of the spare area, the method comprising:

(a) resetting the second information in response to a formatting request to indicate at least that there is no spare area assigned; and

(b) formatting the optical recording medium in response to the formatting request at least to use the spare area as a user data area after said formatting step (b).

15. The method of claim 14, further comprising:

determining if a supplementary spare area has been assigned prior to said resetting step (a) and said formatting step (b), wherein said steps (a) and (b) are performed if a supplementary spare area has been assigned.

16. The method of claim 14, wherein said resetting step (a) comprises converting the second information of the supplementary spare area to a predetermined value.

17. The method of claim 16, wherein the predetermined value is a lowest possible address value.

18. The method of claim 14, wherein said formatting step (b) includes registering sectors judged to have defects into a new PDL (primary defect list) of the first information, if the optical recording medium is to be formatted with certification.

19. The method of claim 14, wherein said formatting step (b) includes registering all sectors previously judged in an old SDL (secondary defect list) of the first information into a new PDL (primary defect list) of the first information if the optical recording medium is to be formatted without certification.

20. The method of claim 18, wherein said formatting step (b) further

includes disposing an old SDL (secondary defect list) of the first information existing prior to said formatting step (b), if the optical recording medium is to be formatted with certification.

21. The method of claim 14, wherein said formatting step (b) reformats the optical recording medium by moving defective sectors registered in a first list to a second list in the first information in the defect management area.

22. The method of claim 14, wherein the spare area includes a primary spare area and a supplementary spare area, and the second information indicates the size of the supplementary spare area.

23. The method of claim 22, wherein the second information includes start and end addresses of the supplementary spare area.

24. The method of claim 23, wherein the start address of the supplementary spare area is reset to a predetermined value when said formatting step (b) occurs.

25. A method of formatting an optical recording medium, said optical recording medium including a primary spare area, a supplementary spare area for replacing a defective unit with an available replacement unit, and a defect management area including defect management information for managing a

defective area, the defect management information including first information to indicate a position of the defective area and second information to indicate a size of the supplementary spare area, the method comprising :

(a) receiving a formatting request to format the optical recording medium;
and

(b) formatting the optical recording medium in response to the formatting request which allows use of the supplementary spare area as a user data area after formatting,

wherein if the supplementary spare area was assigned before said formatting step (b), the method further comprising registering position information of a defective area included in the supplementary spare area into the first information of the defect management information, and resetting the second information indicating the size of the supplementary spare area.

26. The method of claim 25, wherein said step (b) is performed only when a supplementary spare area has been assigned.

27. The method of claim 25, wherein the first information includes a PDL (primary defect list) and a SDL (secondary defect list).

28. The method of claim 25, wherein the supplementary spare area is extended from a fixed location close to a lead-out area to a variable inner location of the optical recording medium.

29. The method of claim 25, wherein the second information includes start and end addresses of the supplementary spare area on the optical recording medium.

30. The method of claim 29, wherein the start address of the supplementary spare area is reset to a predetermined value when said formatting step (b) occurs.

31. The method of claim 25, wherein the second information is reset to a preset code or a value 00h or FFh to indicate that there is no supplementary spare area assigned when said formatting step (b) occurs.

32. A recording medium comprising:
a spare area for replacing a defective area found during a formatting of the recording medium or at least after formatting, with an available replacement area; and

a defect management area including defect management information for managing a defective area, the defect management information including first information to indicate a defective unit found, and second information to indicate a size of the spare area,

wherein the spare area is changed to a usable user area when formatting, while the second information is reset to indicate that there is no longer a spare

area assigned.

33. The recording medium of claim 32, wherein the recording medium is a DVD-RAM.

34. The recording medium of claim 33, wherein the first information corresponds to a PDL (primary defect list) and the second information corresponds to a SDL (secondary defect list).

35. The recording medium of claim 34, wherein a location of a defective unit listed in the SDL is moved to the PDL.

36. The recording medium of claim 32, wherein the spare area includes a primary spare area and supplementary spare area, and the second information includes size information for the supplementary spare area.

37. The recording medium of claim 36, wherein the supplementary spare area is extended from a fixed location close to a lead-out area to a variable inner location of the recording medium.

38. The recording medium of claim 37, wherein the second information includes start and end addresses of the supplementary spare area.

39. The recording medium of claim 38, wherein the start address of the supplementary spare area is reset to a predetermined value when said formatting step (b) occurs.

40. The recording medium of claim 36, wherein the second information is reset to a preset code of a value 00h or FFh to indicate that there is no supplementary spare area assigned when said formatting step (b) occurs.